Fact Sheet:

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FINGERSTOCK MAINTENANCE GUIDE

The Problem

Fingerstock electromagnetic interference (EMI) gasketing is used on doors and other points of entry for high-level electromagnetic shielding enclosures. Due to a lack of knowledge or poor training on the part of personnel at Command, Control, Communications, Computer, and Intelligence (C4I) facilities, fingerstock gasketing is often improperly maintained. This results in deterioration of EMI shielding effectiveness. Without adequate shielding, EMI can disrupt, degrade, or even destroy sensitive equipment.

The Technology

The U.S. Army Construction Engineering Research Laboratories (CERL) recently prepared a Fingerstock Maintenance Guide that provides background information and color-illustrated step-by-step guidance for the repair and maintenance of fingerstock gasketing. The guide is an instruction manual for military and non-military personnel charged with care and maintenance of fingerstock gasketing on enclosures that house electronic equipment vulnerable to EMI. It provides extensive information on fingerstock, including: why fingerstock is important; why, when, and how to clean it; how and where to get cleaning supplies; how to recognize and replace defective fingerstock; and where to find more information.

Benefits/Savings

Proper maintenance of fingerstock gasketing in C4I equipment enclosures substantially improves their reliability as highly effective shields against EMI. In fact, the shielding effectiveness of a C4I equipment shelter can be increased by 20 dB (decibels) simply through proper maintenance of its fingerstock. That means properly maintained fingerstock can stop EMI (in terms of signal strength) that is 10 times stronger than EMI stopped by the same amount of improperly maintained fingerstock.

Status

CERL provided the master copy of the Fingerstock Maintenance Guide, along with a dozen professional review copies, to the U.S. Army Center for Public Works in August 1993. Since then, copies have been distributed to all U.S. Army signal battalions, and to all major U.S. Air Force commands (for further distribution to their C4I facilities) and to the U.S. Naval Facilities Command.

Point of Contact

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